Article

Eco-Social Divides in Europe: Public Attitudes towards Welfare and Climate Change Policies

Adeline Otto * and Dimitri Gugushvili

Centre for Sociological Research, Katholieke Universiteit Leuven, 3000 Leuven, Belgium;

Dimitri.gugushvili@kuleuven.be

* Correspondence: adeline.otto@kuleuven.be

Received: 1 December 2019; Accepted: 2 January 2020; Published: 4 January 2020

Abstract: In the face of accelerating global warming and attendant natural disasters, it is clear that governments all over the world eventually have to take measures to mitigate the most adverse consequences of climate change. However, the costs of these measures are likely to force governments to reconsider some of their tax and spending priorities, of which social spending is the largest expenditure item in developed welfare states. Unless carried out in a way that is considered as fair by most citizens, such trade-off is likely to add a new, ecological dimension to the existing social cleavages in people's preferences for public provision. Whether or not the possible tensions between the two sets of policies have already resulted in the emergence of a new, eco-social divide in Europe is an open question. In this paper, we hypothesise that there are four distinct attitude groups in relation to welfare and climate change policies, and that the probability of belonging to any of these groups is influenced by individuals' socioeconomic and ideological characteristics, as well as the country context in which they live. We test our hypotheses using data from the eighth round of the European Social Survey conducted in 2016/17 in multinomial regression models. Results suggest that across Europe people are considerably divided in their support of public welfare and climate policies, but that support for both dimensions is highest in the Nordic countries. At the micro level, we find political ideology and trust in public institutions to be the most important drivers of a newly emerging eco-social divide.

Keywords: social welfare; environmental sustainability; sustainable welfare; eco-social policies; ESS; multilevel multinomial regression

1. Introduction

In the face of accelerating global warming and attendant natural disasters, it is clear that governments all over the world, and especially in developed countries, will eventually have to take measures to address the most adverse consequences of climate change. While the uncertainty about the magnitude of looming environmental challenges makes it impossible to put a precise price tag on measures to minimise and mitigate their worst effects, various studies estimate the required annual amount of spending to range in the hundreds of billions of dollars (see for example [1–3]). Hence, governments will very likely be forced to reconsider their tax and spending priorities. However, unless financed and implemented in a way that is considered as fair by most citizens, climate change policies are likely to add a new, ecological dimension to the existing social conflicts. A vivid illustration of this possibility are the recent “yellow vests” protests in France triggered by the government's decision to increase regressive fuel taxes as a measure for reducing carbon emission, thereby affecting the low-income rural drivers the most.

Cognisant that effective climate change policies need to be socially legitimate (and progressive), scholars have called for fostering synergy between social and ecological policies [4–6]. Examples of such policies include generating new jobs in green industries, investing in public transport systems, insulating dwellings of low-income households, using targeted subsidies and cash transfers to redistribute revenue generated from environmental taxes, and so on. Where synergies are not created, the same authors warn about potential areas of conflict between the welfare and the eco states. For example, Dryzek stresses that “many policies that make sense from an environmental perspective, such as heavy taxes on fossil fuels, hurt the poor disproportionately” (as cited in [7], p. 334). Similarly, Markkanen and Anger-Kraavi [8] as well as Büchs and colleagues [4] find in their systematic reviews that climate change policies are likely to have adverse side-effects for poor and marginalised population sub-groups. These policies are often regressive, imposing a heavier burden on low-income people unless some compensatory mechanisms are in place. Expecting that climate change and the policies addressing it disproportionately affect the poor and might spur new reactive and defensive politics, Elliott [9] even suggests to theorise climate change sociologically as loss instead of sustainability.

Whether or not the possible tensions between the two sets of policies have already resulted in the emergence of a new, eco-social divide in European countries, whereby different social groups’ conflicting preferences for the state’s role in welfare provision are further augmented by similar antagonism over environmental policies, is an open question as existing literature is both scarce and inconclusive. On the one hand, a study by Spies-Butcher and Stebbing [10] found that in Australia, support for higher social spending over tax cuts was positively associated with prioritising climate change as a top election issue. The authors interpret this finding as an indication of a realignment of materialist and post-materialist values, thereby neglecting the possibility of a new eco-social divide with more than two dimensions. On the other hand, a study of South Korean attitudes found that while pro-welfare citizens were more concerned about ecological issues, they nonetheless expressed less willingness to pay environmental taxes, which is suggestive of potential eco-social divides [11]. To add to uncertainty, a comparative study by Jakobsson and colleagues [12] found that in some European countries the relation between support for income redistribution and willingness to pay for environmental protection was positive, while in others it was negative, and still in others—non-existent. Only in more-recent research, Fritz and Koch [13] overcame this two-dimensional approach. Using multiple correspondence analysis of ESS data, the authors found that there were three main patterns of the relationship between welfare and climate policies. Either both are rejected, both are supported, or support for one dimension crowds the other one out. The study further shows that education, universalistic values, social trust, income and political positioning play an important role in individuals’ attitudes towards social and climate policies.

In this paper, we take a distinct approach to understand the interaction of welfare and environmental attitudes. Rather than just measuring the correlation between the support for the two sets of policies across European countries or modelling underlying structures in the data, we hypothesise that there are four distinct ideational groups in relation to these two factors, and that the probability of belonging to any of these groups is influenced by individuals’ socioeconomic and ideological characteristics, as well as the country context in which they live. We test our hypotheses using data from the eighth round of European Social Survey (ESS8) conducted in 2016/17. Results suggest that across Europe people are considerably divided in their support of public welfare and climate policies, but that support for both dimensions is highest in the Nordic countries. At the micro level, we find political ideology and trust in public institutions to be the most important drivers of a newly emerging eco-social divide. Specifically, eco-social policies are most likely to be supported by women living in big cities, who have a high level of education but feel less satisfied with their income, who highly trust in public institutions and have strong egalitarian ideas that are often claimed as being left-wing. By contrast, the electorate which is opposed to both environmental and welfare agendas is most likely to be financially insecure people, rural residents, males, elderly, people with very low educational qualifications and low trust in public institutions, and those who oppose equality in living standards.

The rest of the paper is organised as follows. The second section introduces the theoretical framework by outlining the key similarities and differences between the welfare and the ecological states, and discussing individual and country level determinants of attitudes towards these institutions. The third section describes the methodology. The fourth section presents the results of the analysis. The concluding section sums up and discusses the practical implications of the main findings.

2. Theoretical Framework

Nowadays, both welfare (e.g., old-age pensions, unemployment insurance, family transfers) and environmental policies (e.g., climate policies like a public carbon tax and subsidies for solar panels in private households) are core government responsibilities in advanced democracies, and as such, share a number of similarities [14]. Both sets of policies have developed as responses to challenges brought about by the processes of modernisation and industrialisation which cannot be dealt at the individual level and require collective action spearheaded by state. To achieve their social and environmental objectives, states use a mix of regulatory, taxation and provision instruments. By doing so, they alter the market-based distribution of resources, as well the range of choices and behaviour of individuals and firms. While “disrupting” the normal operation of markets, both sets of policies have strong moral and pragmatic justification. Welfare provision is legitimised by social justice considerations, as well as economic benefits, such as the advantage of having an educated and healthy work force, automatic stabilisation of consumption across life and economic cycles and minimising social unrest and the associated costs. Likewise, protecting the environment is justified by both concerns for the wellbeing of present and future generations, and the desire to avoid the tragedy of the commons. Additionally, Gough stresses various linkages between both social and climate change policies including that they both configure risks and inequity and that they affect each other [7].

Alongside these similarities, there are large differences between the two types of policies. First and foremost, is the difference in budgets. Welfare expenditure is by far the largest spending item in all advanced democracies, while environment spending is far too modest. To provide a simple example, in 2018 the EU countries spent 297 billion Euros (1.9 per cent of GDP) on environmental protection [15]. By contrast, a year earlier they spent 4131 billion Euros (26.8 per cent of GDP) on social protection benefits [16]. The main contours of present welfare states in developed countries were already in place by the mid-20th century, while the first traces of ecological state started appearing in the late 1960s [14]. Welfare provision is administered by well-resourced and staffed specialised government agencies, while environmental functions have often been delegated to agencies with other primary responsibilities. The relative weight and target of policy instruments also differ. Welfare provision relies mainly on cash and in-kind provision to individuals and households, whereas environmental policies prioritise regulation of producers and consumers. Accordingly, the welfare benefits are immediate and tangible, while environmental benefits are long-term and less visible [10,17]. Social protection remains very much a domestic issue even in the EU member states [18,19], whereas international agreements and EU regulations exert significant influence over national ecological policies. Furthermore, continuous economic growth has been a vital precondition for the formation of welfare state and its expansion [20,21]. By contrast, relentless pursuit of economic growth is widely acknowledged to be the underlying cause of environmental problems, especially the global warming (e.g., [22]). Some analysts suggest that economic growth can be made sustainable by developing environment-friendly production and consumption patterns [3] and by investing in a “green capitalism” (for a critical overview of various green capitalism approaches see [23]). However, many other scientists and environmental activists see the decoupling of growth from carbon emissions unrealistic (at least in the short run) and call for rejecting the growth as a primary policy objective [24–29]. Finally, political mobilisation of the working class through trade unions and associated left-wing parties has been vital for the development of the welfare state, whereas the ecological state lacks a comparable homogenous and well-organised constituency, despite the presence of vocal activist groups and increase in electoral support for various green parties in Europe in recent years [30].

An important implication of these differences is that public support bases may be different for the two set of policies, which will likely further deepen existing social divides if (and when) competition for scarce public resources intensifies. Welfare opinions literature shows that while universal programmes, such as old-age pensions and public healthcare, are supported by vast majorities [31,32], deeply-entrenched cleavages exist in relation to other areas of provision (such as unemployment benefits and social aid for the poor), level of taxes required for social spending and the principle of redistribution of incomes and life chances. One cause of these cleavages is perceived self-interest. It is systematically found that people on low incomes, precarious labour market situation and other disadvantages are in favour of redistribution through social transfers and services financed primarily by the better-off, while the latter oppose it [33–37]. Another cause of cleavages is ideological and normative. Guided by social justice principles, people with left-wing and egalitarian views support public welfare provision while people with right-wing and meritocratic views see public welfare provision as excessive, undermining individual responsibility for one's wellbeing and placing undue burden on other, more hard-working and successful people [33–36,38,39]. In addition, welfare attitudes studies have increasingly considered contextual determinants of popular preferences, such as the level of affluence, distribution of incomes, labour market conditions, social expenditure levels and institutional design of social policies [35,38,40–43].

Ideology, self-interest, and country context have also been found to influence people's environmental preferences. In affluent democracies, ideological cleavages mirror those observed in relation to welfare provision: left-leaning individuals are more concerned about climate change and more in favour of ecological policies than those with right-wing views [30,44–48]. The main reason for this is that the left-wingers perceive environmental degradation as a logical outcome of relentless exploitation of nature essential for the capitalist mode of production; from the right-wing perspective, admitting the ecological repercussions costs of capitalism weakens their fundamental ideological tenet of supremacy of the market and could provide a justification for heavy government regulations which they resent [44,45]. Related to ideological determinants, environmental attitudes studies have also considered the effects of human values, especially the materialist/post-materialist divides. This strand of literature has been inspired by Inglehart's [49] well-known thesis that as societies become more affluent, the traditional concerns with immediate economic security give way to a broader interest in the quality of life, of which self-expression and environmental protection are particularly important. Indeed a number of studies have confirmed that people with post-materialistic values have higher concern for environment [30,50]. On this matter, it is important to note that post-materialist values have also been found to be associated with stronger welfare preferences [51].

However, socioeconomic divisions in environmental preferences are opposite of what is observed in relation to welfare policies—the higher-income groups are more in favour of climate change measures [50,52,53] while being less supportive of public welfare provision than the low-income groups [35,36,54]. The stronger preference of the better-off people for environmental measures can be explained by two factors. For one, safe environment is not only a public, but also a personal good, for which the demand rises once more basic needs (such as food and shelter) are satisfied [50]. Second, higher income is also strongly correlated with more education, which in turn increases awareness of ecological hazards [17,55], and also potentially fosters a greater commitment to the common good [56].

Overall, rather than re-enforcing the existing ideological cleavage in public policy preferences, environmental issues lead to its further fragmentation across socioeconomic lines. Based on this reasoning, our starting hypothesis is that there are four ideational groups defined by their attitudes to the two sets of policies: (a) a group that endorses both social and ecological measures (eco-social public policy enthusiasts); (b) a group that supports welfare interventions, but opposes climate change policies (welfare enthusiasts); (c) a group that is critical of welfare provision but supports ecological policies (environment devotees); and (d) a group that rejects both sets of policies (eco-social public policy sceptics). Next, we expect that the membership propensity of belonging to one of these groups is affected by socioeconomic and ideological characteristics in the following way:

- Egalitarians are more likely to be “eco-social enthusiasts” or “welfare enthusiasts”
- Individuals with more secure financial situation are more likely to be “eco-social enthusiasts” or “environment devotees”

When estimating these associations, we will also control for a number of individual-level factors that have either been shown to affect environmental and/or welfare attitudes, or can be expected to do so for intuitive reasons. We expect that women will be more likely to be in the “eco-social enthusiasts” group as previous studies show that they are more in favour of both welfare provision [34,37,38,57] and climate change policies [46] than men. We anticipate that older people will be more likely to be in the “welfare enthusiast” group as they have been found to be less supportive of ecological measures [46], presumably due to having less interest in policies that have effects in the longer term (e.g., [58]). Because urban residents are more exposed to the negative effects of pollution [17] and people living in rural areas face higher commuting and heating costs [4,7], we anticipate that rural residents will be less likely to be “eco-social enthusiasts” or “environment devotees”. Trust in public institutions is an important precondition for supporting any public policy, whether social [35,59], or environmental [41,60]. Thus, our expectation is that higher levels of trust will be associated with a higher likelihood of being in the “eco-social enthusiasts” and lower probability of being in the “eco-social sceptics” group. As noted before, higher levels of education have been found to be associated with more awareness of ecological hazards, but the effects of education on welfare attitudes are ambiguous: while some studies find that, similar to income, the higher one moves up the education ladder the more one opposes redistribution and welfare provision [40,61,62], others find evidence in support of the “enlightenment theory”. This posits that more education makes people more solidaristic towards fellow citizens [63]. Therefore, we anticipate that people with tertiary education will be less likely to be “eco-social sceptics” compared to other attitudinal categories.

Further, we expect that the propensity of belonging to one of the four groups is also affected by a number of contextual factors. A commonly used macro-level variable for predicting both types of attitudes is country affluence measured by GDP per capita. However, the direction of its effects are ambiguous in both cases. For example, Inglehart [64] showed that public concern with environmental problems was higher in more affluent countries, attributing it to the fact that these countries tend to have larger proportions of people with post-materialist values. Franzen and Meyer [50] also found a positive correlation between GDP per capita and their environmental concern index. However, the results of other studies contest this evidence. Sandvik [65] reported that GDP per capita was negatively associated with concern for global warming in a sample of 46 countries at different levels of development. Similarly, Kim and Wolinsky-Nahmias [66] found that the concern for global warming and support for certain ecological policies was higher in developing countries. Kvaløy and colleagues [30] also identified a negative, though statistically insignificant correlation between GDP per capita and perceived seriousness of global warming. These studies put forward several possible explanations. One is that confronted with an “uncomfortable truth”, people in richer societies resort to denial reaction to suppress the feeling of guilt related to damaging the nature. Other reasons include the higher costs of climate change policies in more affluent countries and less political controversy over the existence and causes of global warming in developing countries.

Comparable ambiguities exist in relation to the effects of country affluence on attitudes towards economic repercussions of the welfare state. On the one hand, it can be assumed that the reason why more developed countries have more extensive welfare systems is that these societies believe that the broader social welfare is worth certain economic costs. On the other hand, controversy over the state’s role in modifying the operation of markets is more pronounced in more-affluent countries, partially because public spending accounts for a very substantial proportion of national economic output in these countries. Thus, there are solid theoretical reasons why higher levels of economic development may be either positively or negatively associated with environmental and welfare attitudes. Hence, we refrain from formulating a hypothesis on how the affluence of a country might affect its citizens’

probability of being in a specific eco-social attitudinal group, but nevertheless, we control for this factor as a potentially important determinant.

The climate change policies addressed in the ESS8 include carbon taxes, subsidies for renewable energy, and regulation banning certain appliances. Since the focus of our research is the intersection of attitudes towards climate change policies and public welfare provision, it is intuitive that the present level of taxation will have an effect and presumably a negative one: people will be more opposed to extra carbon taxes and tax-financed subsidies and more opposed to use financial means for the welfare state where they already face a larger tax burden. However, one could also argue that in democracies the levels of taxation are congruent with public preferences, and therefore countries that have higher taxes are also those that are more open to the idea of contributing to the common pot to solve common problems. Unfortunately, we are unable to test the effects of present taxation as the relevant data on the volume and progressivity of taxes (e.g., the balance between direct and indirect taxes, minimum and maximum marginal income tax rates) are not available for some countries in our sample. Instead, we consider social protection spending is a useful proxy, since taxes and public spending are strongly correlated and social spending is the largest single expenditure item in European welfare states, as noted before. In relation to social spending the evidence is more consistent, though contrary to the presumed negative correlation between the level of taxes and attitudes towards more taxes. In a comparative study of European countries Svallfors [67] found that people had higher preferences for increasing taxes and social expenditure in countries that already spent more on social provision. Similarly, Hedegaard [68] found that people were more in favour of increasing public spending on healthcare in countries that already spend larger proportions of their GDP on this service. Wendt and colleagues [69] also found higher per capita public healthcare expenditure (adjusted in PPP terms) was associated with stronger preferences for public healthcare provision in 14 European countries. In line with this evidence our expectation is that in countries with higher social spending people will be the least likely to be “eco-social sceptics”.

Environmental attitudes studies have also considered whether the extent of pollution has an effect on ecological attitudes. As in the case of the effects of country affluence, the results are contradictory. Inglehart's [64] study found that the general support for environmental protection was higher in countries that faced more severe “objective problems” in terms of air and water pollution. Kvaløy and colleagues [30] also identified a positive, though statistically insignificant association between CO₂ emissions and concern with global warming. However, McCright and colleagues [46] found a negative correlation between the volume of CO₂ emissions and support for addressing climate change and support for policies aiming at reducing the EU greenhouse gas emissions. Similarly, Sandvik [65] found that people expressed less concern about global warming in countries that emit higher amounts of CO₂ per person. As in the case of the effects of affluence, the author attributed this to the “uncomfortable truth” and higher costs of transition to less carbon-intensive economy. In line with this evidence we hypothesise that people in countries with higher CO₂ emissions will be less supportive of ecological measures. Therefore, they will be more likely to be either “welfare enthusiasts” or “eco-social sceptics”.

Compared to the other three contextual factors, the possible effects of poverty are relatively easier to anticipate. We expect that the higher incidence of poverty at national level is likely to be associated with higher probability of being in the “welfare enthusiast” group because it increases the share of people with an immediate interest in welfare provision as opposed to long-term environmental protection and can also potentially make the general public more eager to allocate resources for poverty alleviation due to solidaristic considerations [50].

3. Materials and Methods

3.1. Data Source

The analysis presented in this paper is based on data from the ESS8, which was collected in 2016/17 in 23 European countries. This data source is well-suited for the purpose of our enquiry as it

included two extensive modules—one on environmental attitudes and another on perceptions about the welfare state.

The total sample size of all 23 countries counted 44,387 cases. Unfortunately, only 40,920 of them gave full information on the six items constituting the two dimensions with which the dependent variable was formed. Therefore, we applied random imputation to fill up the missing answers where a respondent had no more than four missing items out of the six. The imputed number was randomly chosen out of the possible answer categories of the respective question. Doing so, only 2% data needed to be imputed, gaining 7.5% complete cases. After imputation, 99.69% (44,250) of the cases had complete information on all 6 items. The advantage of random imputation is that it usually does not strengthen the correlations between the items, which would somewhat penalise the obtained confirmatory factor analysis.

Similar action was taken for one of our independent variables. Trust in political institutions was a latent variable based on four items. Only where a respondent provided an answer to at least one of the four items, a random answer category was imputed. This way, only 2.7% data needed to be imputed, gaining 8.5% respondents with complete answers. After imputation, 44,008 (99.15%) cases could be given scores for all three dimensions (support for the welfare, support for climate policies, trust in political institutions) in the confirmatory factor analysis. Nevertheless, some of the independent variables have also item-nonresponse. 203 respondents did not provide information regarding their level of education, 7 regarding gender, 147 regarding age, 477 regarding feelings about income, 38 regarding level of urbanisation, and 675 regarding fairness. Combined, 1407 cases were lost because of missing values. Eventually, 42,601 (96%) cases were used to run the multilevel multinomial regression model.

3.2. *Dependent Variable*

Our dependent variable—eco-social attitudinal group membership—was based on two latent variables derived through several questions in the ESS8 using confirmatory factor analysis. The first latent factor—support for climate change policies—was measured through three items, namely (a) whether respondents were in favour or opposed to increasing taxes on fossil fuels, such as oil, gas and coal in order to reduce climate change, (b) whether they were in favour or opposed to subsidies for renewable energy, and (c) whether they were in favour or opposed to ban the sale of least energy efficient household appliances to reduce climate change. The answer categories were measured on a five-point Likert scale ranging from ‘strongly in favour’ to ‘strongly against’. The factor loadings for this variable ranged from 0.41 to 0.66.

The second latent factor—support for public welfare provision—was also measured through three items in the ESS8, namely to what extent the respondents considered the government to be responsible for (a) the standard of living for the old, (b) the standard of living for the unemployed, and (c) accessibility of child care service for the working parents. Responses were measured on a 11-point scale ranging from 0—‘not government’s responsibility at all’ to 10—‘entirely government’s responsibility’. Factor loadings for this variable ranged from 0.63 to 0.84. The overall model fit was satisfactory (CFI: 0.995, RMSEA: 0.065). Instead of considering plain Pearson correlations, we opted for polychoric correlations, which better accommodates for the strong left-skewedness of the variables feeding the latent welfare state support variable.

For the purpose of the analysis, we dichotomised both latent variables. All values below the sample means were coded as being ‘against’ climate change policies, and respectively governmental responsibility for public welfare. All values above the average were coded as ‘support’. Based on these two dichotomous variables we derived four attitudinal groups: (1) people who were in favour of climate change policies and supported the welfare state (eco-social enthusiasts); (2) people who opposed climate change policies but supported the public social policies (welfare enthusiasts); (3) people who favoured climate change policies but did not support public welfare programmes (environment devotees); and (4) people who opposed both climate change and public social policies (eco-social

sceptics). To ensure that our model results were not affected by the cut-off point being the sample average, we conducted sensitivity checks by altering the cut-off points in the two dimensions in 25 different scenarios. The results of this check (see Appendix A Figure A1) did not show substantial differences with the models presented below. Only the statistically significant effects of education on the propensity of being an “eco-social enthusiast” and an “environment devotee” were in a few sensitivity scenarios unstable. This is indicated in Figure A1 by estimates varying between below zero (−0.04) and considerably positive (0.36) for belonging to these two groups as compared to the eco-social sceptics, depending on the chosen cut-off point.

3.3. Individual-Level Predictors

Against the background of our first hypothesis on the effect of egalitarian views on support for eco-social policies, we looked for a good indicator approximating such views. While the ESS8 includes an item measuring the left-right political orientation, we did not use this variable as it has been shown that in Eastern European countries the public interprets this continuum in a way that differs from the conventional understanding in the West [70]. Instead, we opted for measuring ideological worldview using the question that asks respondents’ opinion on whether for a society to be fair, differences in people’s standard of living should be small, with answer categories ranging from 1 = agree strongly to 5 = disagree strongly. We reversed the original variable so that higher values express stronger support for smaller differences in living standards.

In tackling our second main hypothesis, we chose to use respondents’ perceived financial security instead of income deciles (derived through reported nominal income). This is because this latter variable recorded about 18% of missing values, with outliers such as Hungary (36%), Ireland (36%), Israel (25%), or Italy (43%). Perceived financial security was measured through a question which asked respondents to choose from the following categories: ‘living comfortably on present income’, ‘coping on present income’, ‘finding it difficult on present income’, ‘finding it very difficult on present income’. This variable was far less impacted by item-nonresponse. Only 1% of the respondents failed to provide an answer to this question, with no country having more than 4% item-nonresponse. For the purpose of our analysis, we also reversed this variable so that higher values correspond to higher perceived financial security.

3.4. Control Variables

Education levels ranged from less than lower secondary to higher tertiary education. Gender categories were female and male. Age was a continuous variable including all ages of 15 years or older. Domicile ranged from big cities to farm or a house in the countryside. For trust in public institutions, we computed a latent variable based on four variables which measure respondents’ trust in parliament, legal system, politicians and political parties on a scale 0 (no trust at all) to 10 (fully trust). For reasons of parsimony, we derived this latent variable by means of the same confirmatory factors analysis that we used for the two latent variables forming the basis of our dependent variable. Factor loadings for this latent variable ranged from 0.61 to 0.95. Higher scores of this latent variable indicated higher trust in public institutions. Due to the high number of missing values that would impact our analysis, we refrained from including social class approximation as suggested by Oesch [71].

3.5. Country-Level Predictors

Countries’ level of affluence was measured through GDP per capita in PPP terms. CO₂ emissions were measured in metric tons per capita. These variables were obtained from the World Bank Open Data (<https://data.worldbank.org/>). Poverty rates were measured against 60 per cent of median income. Social protection spending was measured as a share of GDP. These two indicators were obtained from PAWCER database [72]. To rule out collinearity between these four variables, we inspected zero order correlations, which showed mostly non-significant associations. The only exception was the

moderately negative association ($r = -0.43$) between GDP per capita and the incidence of poverty, thus we are confident that these variables represent separate dimensions.

3.6. Analytical Strategy

The analysis proceeded in two steps. First, we measured the sizes of the eco-social attitudinal groups across as well as within countries. Second, we fitted random-effects multilevel multinomial regression model to estimate the effect of both individual and country-level predictors on the propensity of being in one of the four attitudinal groups, taking eco-social sceptics as the reference category. We chose a model-based approach by including in our model most of the variables that form the basis of the post-stratification weights in the ESS. Design weights were, however, used to correct for sampling imperfections.

4. Results

Before delving into the country variations in the extent of eco-social divides, we first investigated the descriptive statistics in the pooled sample. The first pie chart in Figure 1 suggests that building a substantial ecological layer upon the existing welfare state will not be an easy task. This is because less than a quarter of Europeans (23%) were “eco-social enthusiasts” (ENTH), which implies having a positive stance towards public welfare and climate change policies. Nearly the same share of Europeans (24%) was found in the “welfare enthusiast” (WELF) group which supported public welfare programmes for the old, the unemployed, and children, but rejected the idea of carbon taxes, subsidising renewable energy, and banning the sale of least energy efficient appliances. “Environment devotees” (ENVI)—a group suspicious of the welfare state but in favour of policies mitigating climate change—was slightly more frequent than welfare enthusiasts (26%), which suggests that these are fairly distinct dimensions. Lastly, the group of “eco-social sceptics” (SCEP)—those who disliked both public welfare and environmental policies—was the biggest group (28%), suggesting that they cannot easily be ignored in political decisions aiming for sustainable welfare [73].

As usual, these averages conceal a large variation in the sizes of ideational groups across within countries (see other pie charts in Figure 1). The “eco-social enthusiasts” group was the largest in Nordic countries—Iceland, Norway and Finland, adding credibility to Dryzek’s [7] hypothesis that social-democratic welfare regimes are best placed to address the double social-environmental challenges. The “welfare enthusiast” group was the largest in less developed welfare states of Israel, Lithuania, Portugal, Spain, Estonia, and Russia. “Environment devotees” were particularly frequent in the Netherlands, Sweden, Belgium, and Germany. While being the largest group in the pooled sample, “eco-social sceptics” were actually particularly frequent in France, the UK, and Ireland. Overall, if we take relative equality of sizes of the four groups as a sign of deeper polarisation, the countries with people most divided over the eco-social priorities were Austria, Czech Republic, and Slovenia. While supporting the findings of earlier research by Fritz and Koch [13] regarding the Nordic countries, our results deviate from theirs namely in that we do not find “eco-social enthusiasts” to be very frequent in corporatist welfare states like Austria, Germany, and Switzerland. We expect this to be the result of our different approaches in terms of the operationalisation of support of welfare and climate policies, and the method of analysis. Nevertheless, and just like this earlier study shows, there are large differences between countries. To better understand how the propensity of being in one these groups also differs between individuals, we estimated the effects of several individual-level characteristics and attitudes.

Figure 1. Size of eco-social ideational groups across and within countries.

4.1. Effects of Individual-Level Determinants

Table 1 presents the results of our random-effects multilevel multinomial model. Looking at the individual-level predictors, results largely confirm our hypotheses. The more people favour the idea of small income differences in living standards, the more likely they are to be in any group other than the “eco-social sceptics”.

Regarding our second main independent variable, results indicate that the more dissatisfied individuals are with their present financial situation, the more likely they are to be a “welfare enthusiast” and a “eco-social sceptic”, confirming that low-income groups perceive less immediate need for addressing the challenges of climate change. As income satisfaction increases, basic needs are satisfied and individuals can afford post-materialistic considerations, hence they are more likely to be “environment devotees”. To our surprise, income satisfaction did not make individuals more likely to be “eco-social enthusiasts”. Given the other results, we suppose this is very much driven by the dislike of public welfare provisions.

Our results regarding the effects of individual-level control variables are also largely in line with our expectations. Compared to men, women were more likely to be anything else but “eco-social sceptics”. Older people were more likely to be “welfare enthusiasts” and “eco-social sceptics” than “environment devotees”, which could indicate a particular form of self-interest as well as an age divide

in ambitions to mitigate climate change. Further, with increasing levels of education, individuals were more likely to be in the group of “eco-social enthusiasts” and “environment devotees”. The more individuals live in urban areas the more likely they are to be in any group other than “eco-social sceptics”.

Concerning trust in public institutions, we find that the higher the trust, the more likely people are to be “eco-social enthusiasts” and “environment devotees”. This could indicate that in more trustful environments individuals have confidence that their government is capable of addressing new challenges like climate change and sustainable welfare. Surprisingly, high trust levels negatively affect the propensity of being a “welfare enthusiast”. This could point to earlier research [74] whereby high welfare expectations are frequently paired with distrust in state institutions—a pattern that is particularly frequent in Eastern and South European countries. We double-checked the effects of trust by looking at the effects of satisfaction with the government and they suggest a similar conclusion.

Zooming in at the sizes of effects, it appears that trust in public institutions and egalitarian views are the most influential factors. This suggests that perceptions and ideology are more relevant for one’s group membership than income satisfaction, education or the place of residence.

Table 1. Individual-level determinants of membership of the eco-social attitudinal groups.

	Eco-Social Enthusiast		Welfare Enthusiast		Environment Devotee	
	β	SE	β	SE	β	SE
Egalitarianism	0.49 ***	0.02	0.28 ***	0.01	0.19 ***	0.01
Income satisfaction	−0.11 ***	0.02	−0.18 ***	0.02	0.09 ***	0.02
Age	0.01	0.01	0.09 ***	0.02	−0.04 ***	0.01
Gender (ref. female)	−0.13 ***	0.01	−0.10 ***	0.02	−0.07 **	0.01
Education	0.13 ***	0.02	−0.16 ***	0.01	0.20 ***	0.01
Domicile	0.08 ***	0.02	0.02	0.02	0.05 ***	0.01
Trust	0.17 ***	0.02	−0.33 ***	0.02	0.44 ***	0.02
GDP	−0.10	0.12	−0.10	0.12	0.05	0.06
Social protection expenditure	0.04	0.12	−0.15	0.12	0.16 **	0.06
Poverty	0.12	0.13	0.17	0.13	−0.02	0.07
CO ₂	−0.08	0.12	0.06	0.11	−0.06	0.06

Source: European Social Survey (ESS) 2016. Notes: sample size = 42,601. Reference category = eco-social sceptics. Estimates are standardized. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

4.2. Effects of Contextual Variables

In the final step, we examined the effects of contextual variables, which are displayed in the lower part of Table 1. Results indicate that high social protection expenditure positively influenced the propensity of being an “environment devotee”. However, for all other variables, the effects were not significant. We expect this to be a result of the small sample size on the country level ($N = 23$). With this being said, there might be an effect but we lack sufficient statistical power to infer such effects.

Despite this, we see tentative results. With regard to country affluence, we are surprised to find that higher GDP per capita was potentially related to a lower propensity of being a “eco-social enthusiast” or a “welfare enthusiast”. This provides some evidence in support of the argument that people in richer societies are more polarised over the state’s role in providing welfare and that they are more inclined to suppress the feeling of guilt towards environment through denial and/or that they are more worried about the costs of transition to more environment-friendly societies.

In contrast to our expectation, results further suggest that higher social protection spending as a share of GDP may be associated with a lower propensity of being a “welfare enthusiast”. One possible explanations could be that Europeans in general are cognizant of the close link between social spending and required public budgets or that in some countries people may feel that social spending has reached its acceptable upper ceiling [75].

The effects of poverty show that a higher incidence of income deprivation could increase the probability of being an “eco-social enthusiast” and a “welfare enthusiast” compared to being a sceptic. Finally, we observe that higher levels of CO₂ emissions are potentially related to a lower propensity of being a “eco-social enthusiasts” or an “environment devotees” compared to being a “welfare enthusiast”. This supports our expectation and is comparable to the findings of affluence whereby individuals living in high emission contexts either find it too hard to face this “uncomfortable truth” or fear the higher (social) costs of transition to less carbon-intensive economy.

As for the effects sizes, the results suggest that social spending and poverty incidence could be strong predictors for the group membership propensity.

In terms of explained variance by individual and country-level variables, we explored ANOVA-tables (see Appendix A Table A1) for the two dimensions feeding our dependent variable. This revealed that of the welfare state dimension, about 15% is explained by all the variables in our model. However, the country level takes about 9.5% of these 15%, so that two thirds are explained by the country level. Regarding the climate policy dimension, about 17.77% is explained by all variables. Only 5.7 percentage points of this explained variance is being accounted for by the country level. These explained variances apply given that country is the first variable in the models, allowing the country variable also to take up explained variance that is shared with individual-level variables (type 1 sum of squares). When the country variable is set to be the last variable included in the models, it respectively explains 6.10 and 2.64 percentage points of the explained variance that cannot be attributed to the individual-level variables. In both model approaches, this leads us to guess that welfare state attitudes are much more a matter of context (country) whereas climate policy attitudes are more attributable to individual-level characteristics.

5. Discussion and Conclusions

In this paper, we have argued that the mounting needs of responding to climate change are very likely to force European governments to reconsider their tax and spending priorities over time, presenting them with difficult trade-offs between environmental measures and welfare policies. While the influence of public opinion over actual policies should not be overestimated, it is hard to imagine a significant reorientation of public spending in democratic polities without a substantial degree of public consensus. This makes it important to understand Europeans’ present attitudes towards the two types of policies simultaneously. The current study adds to existing knowledge in a theoretical and an empirical way. Theoretically, we hypothesised four eco-social attitudinal groups defined by their stance towards public welfare and climate policies, and that individual-level and contextual factors influence Europeans’ propensity of belonging to one of these groups. This approach differs from the one taken by Fritz and Koch [13] who modelled different dimensions of welfare and climate policy attitudes on the basis of the ESS8 data. Empirically, we used data from a novel ESS rotating-module on climate change attitudes together with data from the existing rotating module on welfare attitudes to explore the intersection between these two fields at the individual, rather than country level.

Our results suggest that European governments indeed have a difficult task awaiting them as only a small group of their citizens supports climate and social policies simultaneously. The rest either does not agree with the idea of climate policies, or disagrees with public welfare provisions for the old, the unemployed, and children. Having said this, some governments, especially in Nordic countries, seem to be in a better position to address both issues as the proportion of “eco-social enthusiasts” is particularly large in Norway, Iceland, Finland, and Sweden. Compared to these countries, perhaps it is the governments of Austria, Czech Republic, and Slovenia which face an uphill battle, as people in their countries are almost equally divided in the four eco-social attitudinal groups.

Additionally, when taking “eco-social sceptics” and “welfare enthusiasts” together, it appears that setting climate policies on political agendas is particularly hard in countries that strongly depend on fossil fuels or employ a significant share of people in this industry or where there is strong preference of fossil over renewable energy like Czech Republic, Estonia, Israel, Lithuania, Poland, and Russia.

This finding is supported by the research of Fritz and Koch [13] which effectively includes support for brown versus green energy sources in the model. In these countries, it appears that promoting climate policies will require extensive “just transition” strategies [76] and several counteracting social policies supporting individuals and communities negatively affected by efforts to mitigate climate change.

Our findings also give some indications regarding the potential support bases that the governments can count on in their quest to simultaneously advance the environmental and welfare agendas. Eco-social policies are most likely to be supported by women living in big cities, who have a high level of education but feel less satisfied with their income, who highly trust public institutions and have strong egalitarian ideas that are often claimed as being left-wing. By comparison, “environmental devotees” are most likely young women living in big cities, with a good income, a high level of education, high levels of trust in public institutions, and strong preferences for egalitarianism. Conversely, the electorate which is opposed to both environmental and welfare agendas is more likely to be financially insecure people, rural residents, males, elderly, people with very low educational qualifications and those who oppose equality in living standards. So, in order to promote the transition to low-carbon societies and advance eco-social agendas, it appears that policymakers will have to invest in better education and in measures gaining rural areas for their ideas and plans. However, apart from ideological preferences, the individual-level factor that matters the most is trust in key political institutions, such as the parliament, the courts, political parties and politicians. This suggests that enhancing general political trust appears to be a vital precondition for advancing the eco-social agenda.

Additionally, European governments may need to adjust their key environmental messages in line with the specificities of their countries regarding the overall affluence and levels of CO₂ emissions, social spending, and poverty. Although we do not find significant results for most of these variables, result insinuate that in more-affluent, highly carbon-emitting and higher social spending countries the primary challenge will be to persuade the general public that denial and inaction will not solve the mounting environmental problems, and the sooner the necessary measures are taken, the lower costs will be over time. In countries with higher incidence of poverty perhaps the emphasis should be made on the fact that poor people are more likely to bear the brunt of the environmental degradation and therefore ecological policies can also be essential anti-poverty measures.

Despite these important insights, our study has several limitations. For example, when exploring the effects of environmental context, we only used the level of CO₂ emissions in the country. Where available, future research should try to explore the effects of other environmental context variables such as the degree of vulnerability to the damages of climate change. Similarly, if it was available, a more fine-grained measure of the progressivity of national tax systems could be included in the model to estimate how this influences individuals’ attitudes towards (more) tax-financed social and climate policies.

Additionally, we feel that our research only scratched the surface of eco-social divides as a complex phenomenon present in modern welfare states. Numerous important questions remain unanswered. For example, it is still unclear how exactly individuals trade off welfare against climate policy preferences; how far people’s commitment goes when being confronted with different designs and details of welfare and climate policies; whether support of welfare and climate policies is reflected in the acceptance of specific eco-social policies. Additionally, it remains open how public attitudes influence policymakers’ weighting of welfare and climate change concerns and how this feeds back into public opinions. For most of these suggestions there is still a lack of integrated and suitable data. Therefore, we cannot but stress the call that was earlier made by Fritz and Koch [13]: Having appropriate data is key to drawing the wider conclusions and to informing public policymaking. The ESS8 rotating module on climate change is an innovative tool to get first insights in how individuals support welfare and climate policies. Nevertheless, the survey questions on the social dimension are too narrowly focussed on old social risks [6] and the ones on climate policies are not differentiated enough. Hence, we are convinced that more coherent and integrated survey data is critical to a better understanding of

what influences individuals' preferences and attitudes, and how they rank social welfare and public ambitions for climate change adaptation and mitigation, and ecological modernisation.

Author Contributions: Conceptualization, A.O. and D.G.; theoretical discussion, A.O. and D.G.; methodology, A.O. and D.G.; data analysis, A.O. and D.G.; writing—original draft preparation, D.G.; writing—review and editing, A.O. and D.G. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the Flemish Research Foundation (FWO) grant # IRI I001519N.

Acknowledgments: We are very grateful to the feedback we received from Emmanuele Pavolini during the annual conference of the International Sociological Association RC19 conference in Mannheim in August 2019 as well as during the annual conference of the European Network for Social Policy Analysis. Special thanks also go to Koen Beullens for his advice on building the models as well as to the four anonymous reviewers whose comments have greatly improved this article manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Figure A1. Sensitivity analysis.

Table A1. ANOVA analysis.

	(Country First)		(Country Last)	
	Welfare	Climate	Welfare	Climate
Country	2046.41 (9.51%)	552.56 (5.78%)		
Education	102.41 (0.48%)	242.15 (2.53%)	83.85 (0.39%)	253.49 (2.65%)
Gender	43.76 (0.20%)	10.48 (0.11%)	50.70 (0.24%)	6.39 (0.07%)
Age	33.09 (0.15%)	25.09 (0.26%)	17.57 (0.08%)	19.23 (0.20%)
Income	227.81 (1.06%)	53.75 (0.56%)	542.08 (2.52%)	184.92 (1.94%)
Urban	3.05 (0.01%)	26.64 (0.28%)	66.95 (0.31%)	11.85 (0.12%)
Fairness	658.90 (3.06%)	109.97 (1.15%)	865.18 (4.02%)	121.40 (1.27%)
Trust inst.	209.88 (0.98%)	696.45 (7.29%)	386.50 (1.80%)	867.59 (9.08%)
Country			1312.49 (6.10%)	252.22 (2.64%)
Residuals	18,188.94 (84.54%)	7839.49 (82.03%)	18,188.94 (84.54%)	7839.49 (82.03%)
total	21,514.26 (0.00%)	9556.58 (0.00%)	21,514.26 (0.00%)	9556.58 (0.00%)

Note: Table A1 provides the type 1 sums of squares ANOVA analysis for both dimensions, repeated for country being the first as well as the last variable in the regression model.

References

- McKinsey & Company. *Pathways to a Low-Carbon Economy: Version 2 of the Global Greenhouse Gas Abatement Cost Curve*; McKinsey & Company: New York, NY, USA, 2009.
- Stern, N. *The Economics of Climate Change: The Stern Review*; HM Treasury: London, UK, 2006.
- OECD. *Towards Green Growth*; OECD Publishing: Paris, France, 2011.
- Büchs, M.; Bardsley, N.; Duwe, S. Who bears the brunt? Distributional effects of climate change mitigation policies. *Crit. Soc. Policy* **2011**, *31*, 285–307. [\[CrossRef\]](#)
- Gough, I. Carbon mitigation policies, distributional dilemmas and social policies. *J. Soc. Policy* **2013**, *42*, 191–213. [\[CrossRef\]](#)
- Johansson, H.; Khan, J.; Hildingsson, R. Climate change and the welfare state. Do we see a new generation of social risks emerging? In *Sustainability and the Political Economy of Welfare*; Koch, M., Mont, O., Eds.; Routledge: London, UK; New York, NY, USA, 2016; pp. 94–108.
- Gough, I.; Meadowcroft, J.; Dryzek, J.; Gerhards, J.; Lengfeld, H.; Markandya, A.; Ortiz, R. JESP symposium: Climate change and social policy. *J. Eur. Soc. Policy* **2008**, *18*, 325–344. [\[CrossRef\]](#)
- Markkanen, S.; Anger-Kraavi, A. Social impacts of climate change mitigation policies and their implications for inequality. *Clim. Policy* **2019**, *7*, 827–844. [\[CrossRef\]](#)
- Elliott, R. The Sociology of Climate Change as a Sociology of Loss. *Eur. J. Sociol.* **2018**, *59*, 301–337. [\[CrossRef\]](#)
- Spies-Butcher, B.; Stebbing, A. Climate change and the welfare state? Exploring Australian attitudes to climate and social policy. *J. Sociol.* **2016**, *52*, 741–758. [\[CrossRef\]](#)
- Yoon, C.; Hong, B.-E. Welfare Responsibility, Civic Morality, and the Environmental Attitudes in Korea. *Dev. Soc.* **2018**, *47*, 563–585.
- Jakobsson, N.; Muttarak, R.; Schoyen, M.A. Dividing the pie in the eco-social state: Exploring the relationship between public support for environmental and welfare policies. *Environ. Plan. C Polit. Sp.* **2018**, *36*, 313–339. [\[CrossRef\]](#)
- Fritz, M.; Koch, M. Public Support for Sustainable Welfare Compared: Links between Attitudes towards Climate and Welfare Policies. *Sustainability* **2019**, *11*, 4146. [\[CrossRef\]](#)
- Meadowcroft, J. From Welfare State to Ecostate. In *The State and the Global Ecological Crisis*; Barry, J., Eckersley, R., Eds.; MIT Press: Cambridge, MA, USA, 2005.
- Eurostat. *Environmental Protection Expenditure Accounts*; Eurostat: Brussels, Belgium, 2019.
- Eurostat. *Social Protection Statistics—Social Benefits*; Eurostat: Brussels, Belgium, 2019.
- Tjernström, E.; Tietenberg, T. Do differences in attitudes explain differences in national climate change policies? *Ecol. Econ.* **2008**, *65*, 315–324. [\[CrossRef\]](#)
- Falkner, G. The European Union's social dimension. In *European Union Politics*, 5th ed.; Cini, M., Pérez-Solórzano, B.N., Eds.; Oxford University Press: Oxford, UK, 2016; pp. 275–290.
- Leibfried, S. Social Policy: Left to the Judges and the Markets? In *Policy-Making in the European Union*, 7th ed.; Wallace, H., Wallace, W., Pollack, M.A., Eds.; Oxford University Press: Oxford, UK, 2015; pp. 263–292.

20. Wilensky, H.L. *The Welfare State and Equality: Structural and Ideological Roots of Public Expenditures*; University of California Press: Berkeley, CA, USA, 1975.
21. Myles, J.; Quadagno, J. Political Theories of the Welfare State. *Soc. Serv. Rev.* **2002**, *76*, 34–57. [\[CrossRef\]](#)
22. Lessenich, S. *Living Well at Others' Expense: The Hidden Costs of Western Prosperity*; Polity Press: Cambridge, UK, 2019.
23. Tienhaara, K. Varieties of green capitalism: Economy and environment in the wake of the global financial crisis. *Environ. Polit.* **2014**, *23*, 187–204. [\[CrossRef\]](#)
24. Alexander, S. Planned economic contraction: The emerging case for degrowth. *Environ. Polit.* **2012**, *21*, 349–368. [\[CrossRef\]](#)
25. Georgescu-Roegen, N. Energy and Economic Myths. *South. Econ. J.* **1975**, *41*, 347–381. [\[CrossRef\]](#)
26. Hueting, R. Why environmental sustainability can most probably not be attained with growing production. *J. Clean. Prod.* **2010**, *18*, 525–530. [\[CrossRef\]](#)
27. Kallis, G. In defence of degrowth. *Ecol. Econ.* **2011**, *70*, 873–880. [\[CrossRef\]](#)
28. Meadows, D.; Meadows, D.H.; Randers, J. *Limits to Growth: The 30-Year Update*; White River Junction; Chelsea Green Publishing Company: Hartford, VT, USA, 2004.
29. Jacobs, M. Sustainable Development as a Contested Concept. In *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*; Dobson, A., Ed.; Oxford University Press: Oxford, UK, 1999; pp. 21–45.
30. Kvaløy, B.; Finseraas, H.; Listhaug, O. The publics' concern for global warming: A cross-national study of 47 countries. *J. Peace Res.* **2012**, *49*, 11–22. [\[CrossRef\]](#)
31. Papadakis, E.; Bean, C. Popular support for the welfare State: A comparison between institutional regimes. *J. Public Policy* **1993**, *13*, 227–254. [\[CrossRef\]](#)
32. Svallfors, S. Welfare regimes and welfare opinions: A comparison of eight Western countries. In *European Welfare Production: Institutional Configuration and Distributional Outcome*; Vogel, J., Theorell, T., Eds.; Kluwer Academic: Boston, MA, USA, 2003.
33. Hasenfeld, Y.; Rafferty, J.A. The determinants of public attitudes toward the welfare state. *Soc. Forces* **1989**, *67*, 1027–1048. [\[CrossRef\]](#)
34. Edlund, J. Trust in government and welfare regimes: Attitudes to redistribution and financial cheating in the USA and Norway. *Eur. J. Polit. Res.* **1999**, *35*, 341–370. [\[CrossRef\]](#)
35. van Oorschot, W.; Meuleman, B. Welfare performance and welfare support. In *Contested Welfare States: Welfare Attitudes in Europe and Beyond*; Svallfors, S., Ed.; Stanford University Press: Stanford, CA, USA, 2012.
36. Rehm, P. Social Policy by Popular Demand. *World Polit.* **2011**, *63*, 271–299. [\[CrossRef\]](#)
37. Svallfors, S. Worlds of Welfare and Attitudes to Redistribution: A Comparison of Eight Western Nations. *Eur. Sociol. Rev.* **1997**, *13*, 283–304. [\[CrossRef\]](#)
38. Blekesaune, M.; Quadagno, J. Public Attitudes toward Welfare State Policies: A Comparative Analysis of 24 Nations. *Eur. Sociol. Rev.* **2003**, *19*, 415–427. [\[CrossRef\]](#)
39. Groskind, F. Ideological influences on public support for assistance to poor families. *Soc. Work* **1994**, *39*, 81–89.
40. Dallinger, U. Public support for redistribution: What explains cross-national differences? *J. Eur. Soc. Policy* **2010**, *20*, 333–349. [\[CrossRef\]](#)
41. Hammar, H.; Jagers, S.C. Can trust in politicians explain individuals' support for climate policy? The case of CO₂ tax. *Clim. Policy* **2006**, *5*, 613–625. [\[CrossRef\]](#)
42. van Oorschot, W.; Reeskens, T.; Meuleman, B. Popular perceptions of welfare state consequences: A multilevel, cross-national analysis of 25 European countries. *J. Eur. Soc. Policy* **2012**, *22*, 181–197. [\[CrossRef\]](#)
43. Dion, M.L.; Birchfield, V. Economic Development, Income Inequality, and Preferences for Redistribution. *Int. Stud. Q.* **2010**, *54*, 315–334. [\[CrossRef\]](#)
44. Lewis, G.B.; Palm, R.; Feng, B. Cross-national variation in determinants of climate change concern. *Environ. Polit.* **2018**, *28*, 793–821. [\[CrossRef\]](#)
45. Nawrotzki, R.J. The Politics of Environmental Concern: A Cross-National Analysis. *Organ. Environ.* **2012**, *25*, 286–307. [\[CrossRef\]](#)
46. McCright, A.M.; Dunlap, R.E.; Marquart-Pyatt, S.T. Political ideology and views about climate change in the European Union. *Environ. Polit.* **2016**, *25*, 338–358. [\[CrossRef\]](#)
47. Clements, B. Exploring public opinion on the issue of climate change in Britain. *Br. Polit.* **2012**, *7*, 183–202. [\[CrossRef\]](#)

48. Aasen, M. The polarization of public concern about climate change in Norway. *Clim. Policy* **2017**, *17*, 213–230. [[CrossRef](#)]
49. Inglehart, R. *The Silent Revolution*; Princeton University Press: Princeton, NJ, USA, 1977.
50. Franzen, A.; Meyer, R. Environmental attitudes in cross-national perspective: A multilevel analysis of the ISSP 1993 and 2000. *Eur. Sociol. Rev.* **2010**, *26*, 219–234. [[CrossRef](#)]
51. Gelissen, J. Popular support for institutionalized solidarity: A comparison between European welfare states. *Int. J. Soc. Welf.* **2000**, *9*, 285–300. [[CrossRef](#)]
52. Carlsson, F.; Kataria, M.; Krupnick, A.; Lampi, E.; Lofgren, A.; Qin, P.; Chung, S.; Sterner, T. *Paying for Mitigation: A Multiple Country Case Study*; Resources for the Future: Washington, DC, USA, 2010.
53. Meyer, R.; Liebe, U. Are the affluent prepared to pay for the planet? Explaining willingness to pay for public and quasi-private environmental goods in Switzerland. *Popul. Environ.* **2010**, *32*, 42–65. [[CrossRef](#)] [[PubMed](#)]
54. Busemeyer, M.R.; Neimanns, E. Conflicting preferences towards social investments and transfers in mature welfare states: The cases of unemployment benefits and childcare provision. *J. Eur. Soc. Policy* **2017**, *27*, 229–246. [[CrossRef](#)]
55. Poortinga, W.; Whitmarsh, L.; Steg, L.; Böhm, G.; Fisher, S. Climate change perceptions and their individual-level determinants: A cross-European analysis. *Glob. Environ. Chang.* **2019**, *55*, 25–35. [[CrossRef](#)]
56. Gelissen, J. Explaining Popular Support for Environmental Protection: A Multilevel Analysis of 50 Nations. *Environ. Behav.* **2007**, *39*, 392–415. [[CrossRef](#)]
57. Gugushvili, D. Public attitudes towards the poor in the South Caucasus: A matter of solidarity and conditionality. *Int. J. Sociol. Soc. Policy* **2018**, *38*, 426–443. [[CrossRef](#)]
58. Reeskens, T.; van Oorschot, W. Immigrants' Attitudes towards Welfare Redistribution. An Exploration of Role of Government Preferences among Immigrants and Natives across 18 European Welfare States. *Eur. Sociol. Rev.* **2015**, *31*, 433–445. [[CrossRef](#)]
59. Rothstein, B. The universal welfare state as a social dilemma. *Ration. Soc.* **2001**, *13*, 213–233. [[CrossRef](#)]
60. Jagers, S.C.; Löfgren, Å.; Strippel, J. Attitudes to personal carbon allowances: Political trust, fairness and ideology. *Clim. Policy* **2010**, *10*, 410–431. [[CrossRef](#)]
61. Fraile, M.; Ferrer, M. Explaining the Determinants of Public Support for Cuts in Unemployment Benefits Spending across OECD Countries. *Int. Sociol.* **2005**, *20*, 459–481. [[CrossRef](#)]
62. Jaeger, M.M. United but divided: Welfare regimes and the level and variance in public support for redistribution. *Eur. Sociol. Rev.* **2009**, *25*, 723–737. [[CrossRef](#)]
63. Robinson, R.V.; Bell, W. Equality, success, and social justice in England and the United States. *Am. Sociol. Rev.* **1995**, *43*, 125–143. [[CrossRef](#)]
64. Inglehart, R. Public Support for Environmental Protection: Objective Problems and Subjective Values in 43 Societies. *Polit. Sci. Polit.* **1995**, *28*, 57–72. [[CrossRef](#)]
65. Sandvik, H. Public concern over global warming correlates negatively with national wealth. *Clim. Chang.* **2008**, *90*, 333–341. [[CrossRef](#)]
66. Kim, S.Y.; Wolinsky-Nahmias, Y. Cross-National Public Opinion on Climate Change: The Effects of Affluence and Vulnerability. *Glob. Environ. Polit.* **2014**, *14*, 79–106. [[CrossRef](#)]
67. Svallfors, S. Government quality, egalitarianism, and attitudes to taxes and social spending: A European comparison. *Eur. Polit. Sci. Rev.* **2013**, *5*, 363–380. [[CrossRef](#)]
68. Hedegaard, T.F. Thinking inside the Box: How unsuccessful governments, corruption and lock-in effects influence attitudes towards government spending on public healthcare and public old age pensions across 31 countries. *Acta Politol.* **2018**, *10*, 1–16.
69. Wendt, C.; Mischke, M.; Pfeifer, M. *Welfare States and Public Opinion. Perceptions of Healthcare Systems, Family Policy and Benefits for the Unemployed and Poor in Europe*; Edward Elgar Publishing: Cheltenham, UK, 2011.
70. Tavits, M.; Letki, N. When Left Is Right: Party Ideology and Policy in Post-Communist Europe. *Am. Polit. Sci. Rev.* **2009**, *103*, 555–569. [[CrossRef](#)]
71. Oesch, D. Coming to Grips with a Changing Class Structure: An Analysis of Employment Stratification in Britain, Germany, Sweden and Switzerland. *Int. Sociol.* **2006**, *21*, 263–288. [[CrossRef](#)]
72. Fink, M.; Umit, R.; Valkova, K. *PCD—PAWCER Contextual Dataset*; Institute for Advanced Studies: Vienna, Austria, 2018.
73. Koch, M.; Mont, O. (Eds.) *Sustainability and the Political Economy of Welfare*; Routledge: London, UK; New York, NY, USA, 2016.

74. van Oorschot, W.; Gugushvili, D. Retrenched, but still desired? Aspects of the social legitimacy of the welfare state in Russia compared to the EU countries. *Eur. Asia Stud.* **2019**, *71*, 345–364. [[CrossRef](#)]
75. Flora, P. *Growth to Limits: The Western European Welfare States Since World War II. Volume 2: Germany, United Kingdom, Ireland, Italy*; De Gruyter: Berlin, Germany, 1986.
76. Galgóczi, B. *From Paris to Katowice: The EU Needs to Step Up Its Game on Climate Change and Set Its Own Just Transition Framework*; European Trade Union Institute: Brussels, Belgium, 2018.

© 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).